

Appl. No. 10/653,350
Reply to Office Action of November 15, 2006
Response dated May 15, 2007

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Canceled)
2. (Canceled)
3. (Withdrawn) An isolated nucleic acid encoding the recombinant human interferon alpha isoform of claim 1.
4. (Withdrawn) The isolated nucleic acid according to claim 3, wherein the encoded recombinant human interferon alpha isoform comprises the amino acid sequence of SEQ ID NO:1 modified to contain at least one N-glycosylation motif with the sequence Asn-Xaa-Ser/Thr such that the asparagine residue of the motif occurs at a site selected from the group consisting of Cys1, Asp2, Pro4, Gln5, Thr6, His7, Ser8, Arg22, Arg23, Ile24, Ser25, Leu26, Phe27, Ser28, Cys29, Leu30, Lys31, Asp32, Arg33, His34, Asp35, Phe36, Gly37, Pro39, Gln40, Glu41, Glu42, Phe43, Gly44, Asn45, Gln46, Phe47, Gln48, Lys49, Ala50, Glu51, Thr52, Ser68, Asp77, Lys134, Tyr135, Ser136, Gln158, Glu159, Ser160, Leu161, Arg162, Ser163, Lys164, and Glu165.
5. (Withdrawn) An expression vector comprising the nucleic acid of claim 3.
6. (Canceled)
7. (Canceled)

Appln. No. 10/653,350
Reply to Office Action of November 15, 2006
Response dated May 15, 2007

8. (Canceled)

9. (Canceled)

10. (Withdrawn) A method for producing an N-glycosylated human interferon alpha isoform comprising:

culturing a eukaryotic host cell transformed or transfected with the expression vector of claim 8 under conditions that permit expression of the encoded recombinant human interferon alpha isoform; and

isolating the expressed recombinant human interferon alpha isoform from the culture.

11. (New) A recombinant human interferon alpha isoform comprising the amino acid sequence of SEQ ID NO: 1 that has been modified such that His 34 has been replaced by Asn and Phe 36 has been replaced by Ser.

12. (New) A recombinant human interferon alpha isoform comprising the amino acid sequence of SEQ ID NO: 1 that has been modified such that His 34 has been replaced by Asn, Phe 36 has been replaced by Ser and Leu 26 has been replaced by Asn.

13. (New) A recombinant human interferon alpha isoform comprising the amino acid Sequence of SEQ ID NO: 1 that has been modified such that His 34 has been replaced by Asn, Phe 36 has been replaced by Ser and Lys 134 has been replaced by Asn.

Appl. No. 10/653,350
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14 (New) A recombinant human interferon alpha isoform having the sequence of SEQ ID NO: 1 that has been modified such that His 34 has been replaced by Asn, Phe 36 has been replaced by Ser, Leu 26 has been replaced by Asn and Lys 134 has been replaced by Asn.

15. (New) A pharmaceutical composition comprising the recombinant human interferon alpha isoform according to any one of claims 11 to 14 and a pharmaceutically acceptable carrier.